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(54) Active noise attenuation system

(57) A noise attenuation system for the air induction ducting particularly for an internal combustion engine has an outwardly facing loudspeaker mounted within an air inlet duct so as to lie in the plane of the air intake opening. Signals from an error microphone (and also optionally a detector microphone) are processed in a signal controller, the output driver used to drive the loud-

speaker so that a cancellation sound field is produced, which attenuates the noise emanating from the air intake. The speaker is mounted on a fairing body creating an annular flow passage, a filter element ring inserted in the annular space.

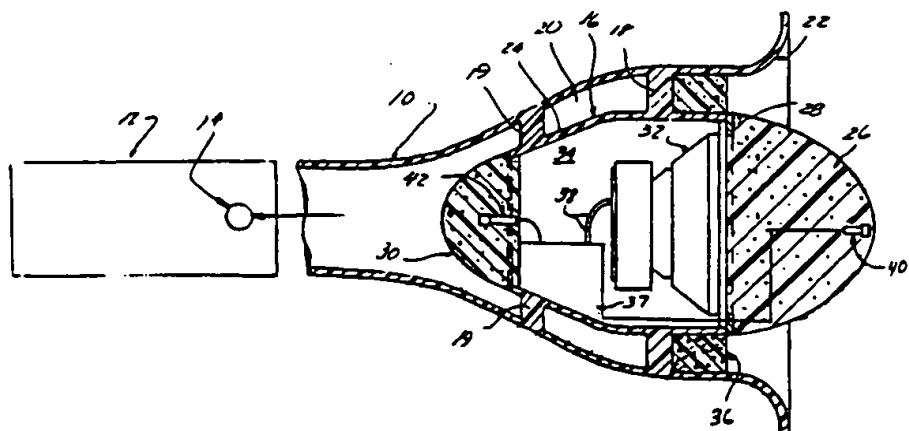


FIG-1



EUROPEAN SEARCH REPORT

Application Number

EP 98 11 0102

DOCUMENTS CONSIDERED TO BE RELEVANT								
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.)					
D, X	WO 97 20307 A (SIEMENS ELECTRIC LTD) 5 June 1997 * page 2 *	1-3, 10, 11, 14	F02M35/12					
A	* page 3, line 16 - page 6, line 3; claims 1,2; figures 1,2 *	4						
A	FR 2 740 599 A (TECHNOFIRST) 30 April 1997 * page 1, line 3 - page 2, line 12 * * page 8, line 36 - page 9, line 29 * * page 18, line 38 - page 20, line 22; figures 1,6 *	1-3, 5, 8, 10, 11, 13						
A	GB 2 203 488 A (FORD MOTOR CO) 19 October 1988 * abstract; figures 1,2 *	9						
A	US 3 936 606 A (WANKE RONALD L) 3 February 1976 * column 2, line 59 - column 4, line 4; figure 1 *	1, 3, 7, 10, 11, 14						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">TECHNICAL FIELDS SEARCHED (Int.Cl.)</td> </tr> <tr> <td style="padding: 2px;">F02M</td> </tr> <tr> <td style="padding: 2px;">G10K</td> </tr> <tr> <td style="padding: 2px;">F01N</td> </tr> <tr> <td style="padding: 2px;">F02B</td> </tr> </table>				TECHNICAL FIELDS SEARCHED (Int.Cl.)	F02M	G10K	F01N	F02B
TECHNICAL FIELDS SEARCHED (Int.Cl.)								
F02M								
G10K								
F01N								
F02B								
The present search report has been drawn up for all claims								
Place of search	Date of completion of the search		Examiner					
THE HAGUE	4 June 1999		Marsano, F					
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document						
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document								

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ON EUROPEAN PATENT APPLICATION NO.

EP 98 11 0102

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04-06-1999

Patent document cited in search report		Publication date	Patent family member(s)		Publication date	
WO 9720307	A	05-06-1997	US	5828759 A	27-10-1998	
			CN	1207819 A	10-02-1999	
			EP	0878001 A	18-11-1998	
FR 2740599		30-04-1997	AU	7498696 A	22-05-1997	
			CA	2233253 A	09-05-1997	
			EP	0858651 A	19-08-1998	
			WO	9716816 A	09-05-1997	
GB 2203488	A	19-10-1988	NONE			
US 3936606	A	03-02-1976	NONE			